

AMENDMENTS TO THE CLAIMS

1. (Currently Amended) A ~~layer-4~~ switch comprising:

a layer 2 switch having a plurality of ports, wherein a third port of the plurality of ports is configured adapted to be in communication with a client;

a first server configured adapted to be in communication with a first one of said the plurality of ports;

a second server configured adapted to be in communication with a second one of said the plurality of ports; and

said the first server and said the second server configured being configurable to function with said the layer 2 switch to cause the switch to operate as a layer 4 switch.

2. (Currently Amended) The ~~layer-4~~ switch of claim 1, wherein said the layer 2 switch is an ethernet switch.

3. (Currently Amended) The ~~layer-4~~ switch of claim 2, further comprising an IP layer, a TCP layer and an ethernet layer are configured to operate in accordance with layer 4 switching protocol.

4. (Currently Amended) The ~~layer-4~~ switch of claim 1, wherein only one of said the first server and said the second server can be an active server for accepting new connections from said the client.

5. (Currently Amended) The ~~layer-4~~ switch of claim 1, wherein said the first server and said the second server are configured to share a virtual IP address.

6. (Currently Amended) The ~~layer-4~~ switch of claim 5, wherein said the first and said the second servers are configured to respond to an ARP request for said the virtual IP address with a virtual MAC address.

7. (Currently Amended) The ~~layer-4~~ switch of claim 5, wherein ~~said the~~ only one of ~~said the~~ first server and ~~said the~~ second server can be an active server such that only the active server accepts new connections.

8. (Currently Amended) The ~~layer-4~~ switch of claim 5, wherein at least one of ~~said the~~ first server and ~~said the~~ second server is a passive server such that ~~said the~~ passive server drops all inbound packets having ~~said the~~ virtual IP address with a SYN flag set.

9. (Currently Amended) The ~~layer-4~~ switch of claim 5, wherein at least one of ~~said the~~ first server and ~~said the~~ second server is a passive server, ~~said the~~ passive server continues to process a previously established session and does not establish a new session.

10. (Currently Amended) The ~~layer-4~~ switch of claim 1, further comprising at least one server(s), wherein each one of ~~said the~~ at least one server(s) is configured adapted to be in communication with a different port of ~~said the~~ plurality of ports.

11. (Currently Amended) The ~~layer-4~~ switch of claim 10, wherein each of ~~said the~~ at least one server(s) is configurable configured to function with ~~said the~~ first server, ~~said the~~ second server and ~~said the~~ layer 2 switch as a layer 4 switch.

12. (Currently Amended) The ~~layer-4~~ switch of claim 11, wherein ~~said the~~ first server, ~~said the~~ second server and ~~said the~~ at least one server(s) are configured to have a virtual IP address such that ~~said the~~ virtual IP address is the same.

13. (Currently Amended) The ~~layer-4~~ switch of claim 11, wherein ~~said the~~ only one of ~~said the~~ first server, ~~said the~~ second server and ~~said the~~ at least one server(s) can be an active server such that only the active server accepts new connections.

14. (Currently Amended) The ~~layer-4~~ switch of claim 13, wherein each one of ~~said the~~ first server, ~~said the~~ second server and each one of ~~said the~~ at least one server(s) that is not the active server are passive servers.

15. (Currently Amended) The ~~layer 4~~ switch of claim 14, wherein ~~each said passive server each one of the passive servers~~ continues to process any previously established session and does not establish a new session.

16. (Currently Amended) The ~~layer 4~~ switch of claim 14, wherein if one server of ~~said the~~ first server, ~~said the~~ second server and ~~said the~~ at least one server(s) becomes configured to be a partially active server for a particular IP address, then the other servers of ~~said the~~ first server, ~~said the~~ second server and ~~said the~~ at least one server(s) are configured to partially be passive for ~~said the~~ particular IP address.

17. (Currently Amended) The ~~layer 4~~ switch of claim 14, wherein ~~said the~~ first server, ~~said the~~ second server, and ~~said the~~ at least one server(s) are configured to determine which server should be ~~said the~~ active server.

18. (Currently Amended) The ~~layer 4~~ switch of claim 14 wherein ~~said the~~ first server, ~~said the~~ second server, and ~~said the~~ at least one server(s) are configured to communicate with each other via ~~said the~~ layer 2 switch in order to determine which server should be ~~said the~~ active server.

19. (Currently Amended) The ~~layer 4~~ switch of claim 18, wherein ~~said the~~ determination of which switch should be ~~the~~ active switch is based on a comparison of a metric associated with each server.

20. (Currently Amended) A method of creating a ~~layer 4~~ switch comprising:
configuring a plurality of servers to each have the same virtual IP address;
configuring ~~said the~~ plurality of servers to each have the same virtual MAC address for ~~said the~~ virtual IP address;
establishing a communication path between ~~said the~~ plurality of servers and a layer 2 switch such that each one of ~~said the~~ plurality of servers is ~~configured adapted~~ to be in communication with a different port of ~~said the~~ layer 2 switch;

configuring said the plurality of servers, in cooperation with said the layer 2 switch, to operate collectively as a layer 4 switch, said the layer 4 switch configured adapted to be in communication with a client via one port of said the layer 2 switch.

21. (Currently Amended) The method of claim 20, wherein said the step of configuring said the plurality of servers, in cooperation with said the layer 2 switch, to operate collectively as a layer 4 switch comprises establishing one of said the plurality of servers to be an active server and configuring the remaining ones of said the first server, said the second server, and said the at least one server(s) to be passive servers; said the active server being configured adapted to be able to set up new connections with said the client.

22. (Currently Amended) The method of claim 21, further comprising said the plurality of servers communicating with each other via said the layer 2 switch at configurable intervals and determining whether said the active server should remain said the active server or whether another one of said the plurality of servers should become said the active server.

23. (Currently Amended) The method of claim 20, wherein said the step of configuring said the plurality of servers, in cooperation with said the layer 2 switch, to operate collectively as said the layer 4 switch comprises configuring each of said the plurality of servers such that a TCP layer, an IP layer, and a layer 2 protocol acts as said the layer 4 switch.

24. (Currently Amended) The method of claim 23, wherein said the layer 2 switch is an ethernet switch and said the layer 2 protocol is ethernet.

25. (Currently Amended) The method of claim 23, wherein said the step of configuring said the plurality of servers, in cooperation with said the layer 2 switch, to operate collectively as a layer 4 switch further comprises establishing one of said the plurality of servers to be an active server and configuring the remaining ones of said the first server, said the second server, and said the at least one server(s) to be passive servers; said the active server being configured adapted to be able to set up new connections with said the client.

26. (Currently Amended) The method of claim 25, further comprising changing said the active server to a different one of said the plurality of servers.

27. (Currently Amended) The method of claim 21, wherein said the step of configuring said the plurality of servers, in cooperation with said the layer 2 switch, to operate collectively as said the layer 4 switch further comprises configuring each of said the plurality of servers such that a TCP layer, an IP layer, and a layer 2 protocol acts as said the layer 4 switch.

28. (Currently Amended) The method of claim 27, wherein said the layer 2 switch is an ethernet switch and said the layer 2 protocol ethernet.

29. (Currently Amended) A layer 4 switch comprising:

a plurality of servers, each server configured to have a virtual IP address that is the same and a configurable MAC address for said the virtual IP address;

a layer 2 switch having a plurality of ports, one of said the plurality of ports being for communicating with a client;

a communication path between each one of said the plurality of servers and said the plurality of ports such that a subnetwork is created between said the plurality of servers;

said the plurality of servers being configured to operate collectively with said the level layer 2 switch so that the switch operates as a level layer 4 switch; and

wherein only one of said the plurality of servers is designated as an active server that establishes new connections with said the client, said the plurality of servers utilizing said the subnetwork at configured intervals to aid in a determination of which server should become said the active server.

30. (Currently Amended) The layer 4 switch of claim 29, wherein said the determination of which one of said the plurality of servers should become said the active server is based on a comparison of at least one metric of each one of said the plurality of servers.

31. (Currently Amended) The ~~layer-4~~ switch of claim 29, wherein ~~said the~~ plurality of servers, in combination with ~~said the level~~ layer 2 switch, are configured to establish an IP layer, a TCP layer and a subnetwork layer to act as a ~~level~~ layer 4 switch.

32. (Currently Amended) The ~~layer-4~~ switch of claim 31, wherein ~~said the~~ subnetwork is ethernet.